**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of	)
	)
Jeffrey A. DEAN et al.	) **ATTN: APPEAL BRIEF - PATENTS**
	)
Application No.: 09/734,883	) Group Art Unit: 2176
	)
Filed: December 13, 2000	) Examiner: J. Debrow
	)
For: SCORING LINKS IN A DOCUMENT	)

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Randolph Building
401 Dulany Street
Alexandria, VA 22314

APPEAL BRIEF

This Appeal Brief is submitted in response to the final Office Action, dated May 3, 2007,

and in support of the Notice of Appeal, filed August 3, 2007.

I.   REAL PARTY IN INTEREST

The real party in interest in this appeal is Google Inc.

II.   RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

Appellants are unaware of any related appeals, interferences, or judicial proceedings.

III.   STATUS OF CLAIMS

Claims 39 and 41-66 are pending in this application.

Claims 39, 41, 44-53, 55-61, and 64-66 have been finally rejected under 35 U.S.C. § 103(a) as unpatentable over Arthurs (U.S. Patent No. 6,591,261) in view of Pant et al. (U.S. Patent No. 6,012,053).

Claims 42, 43, 54, 55, 62, and 63 have been finally rejected under 35 U.S.C. § 103(a) as unpatentable over Arthurs in view of Pant et al. and Page (U.S. Patent No. 6,285,999).

Claims 1-38 and 40 were previously canceled without prejudice or disclaimer.

Claims 39 and 41-66 are the subject of the present appeal. These claims are reproduced in the Claim Appendix of this Appeal Brief.

IV.   STATUS OF AMENDMENTS

An After Final Request for Reconsideration was filed on July 2, 2007, subsequent to the final Office Action. No claim amendments were filed subsequent to the final Office Action. The Examiner issued an Advisory Action, dated August 1, 2007, that indicated that the After Final Request for Reconsideration did not place the application in condition for allowance.

V.   SUMMARY OF CLAIMED SUBJECT MATTER

In the paragraphs that follow, a concise explanation of the independent claims and the claims reciting means-plus-function or step-plus-function language that are involved in this appeal will be provided by referring, in parenthesis, to examples of where support can be found in the specification and drawings.

Claim 39 recites a computer-implemented method that comprises identifying a document

that is stored on a server in a network and that includes links to linked documents (Fig. 6, 610; page 12, line 16 - page 13, line 4); determining scores for a plurality of the links in the identified document (Fig. 6, 630; page 13, lines 10-16); modifying the identified document based on the determined scores (page 15, lines 15-17), where the modifying includes reordering at least two of the links based on the determined scores (page 15, lines 18-19), or sorting at least two of the links based on the determined scores (page 15, line 19 - page 16, line 2); and providing the modified document to a user (Fig. 6, 670; page 16, line 18 - page 17, line 3).

Claims 41 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes for each of the linked documents, determining scores for one or more linking documents that contain links to the linked document (page 13, lines 18-19), determining a score for each of the linked documents based on the scores of the one or more linking documents (page 13, lines 18-19), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 42 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes determining a clickthrough rate for each of the linked documents (page 14, lines 3-7), determining a score for each of the linked documents based on the determined clickthrough rates (page 14, lines 3-7), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 43 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes determining a

measure of popularity associated with each of the linked documents (page 14, lines 8-12),

determining a score for each of the linked documents based on the determined measure of

popularity (page 14, lines 8-12), and associating the determined scores for the linked documents

with the corresponding links in the identified document (page 13, lines 10-12).

Claim 46 recites that modifying the identified document includes comparing the

determined scores to a threshold (page 16, lines 6-8), and deleting one of the links from the

identified document when the determined score for the one of the links falls below the threshold

(page 16, lines 6-8).

Claim 47 recites a computer-implemented method that comprises receiving a search

query (page 12, line 16 - page 13, line 1); providing a list of search results in response to the

search query (page 12, line 16 - page 13, line 1); receiving selection of one of the search results

in the list of search results (page 12, line 16 - page 13, line 1; page 14, lines 14-15); identifying

links in a document corresponding to the selected search result (page 12, line 16 - page 13, line

4); determining a score for one of the links based on a degree of match between the search query

and a content of a linked document pointed to by the one of the links (page 13, lines 10-16; page

14, lines 13-16); modifying the document based on the determined score for the one of the links

(page 15, line 15 - page 16, line 17); and providing the modified document (page 16, line 18 -

page 17, line 3).

Claim 48 recites that determining the score for the one of the links includes determining

scores for each of a plurality of the links in the document based on a degree of match between

the search query and a content of a linked document pointed to by the link (page 14, line 13 -

page 15, line 2); and that modifying the document includes reordering the links based on the

determined scores (page 15, line 18 - page 16, line 2).

Claim 49 recites that reordering the links includes sorting the links based on the

determined scores (page 15, line 18 - page 16, line 2).

Claim 50 recites that modifying the document includes changing at least one visual

characteristic of the one of the links within the document based on the determined score (page

16, lines 3-6).

Claim 51 recites comparing the determined score to a threshold (page 16, lines 6-8); and

deleting the one of the links when the determined score for the one of the links falls below a

threshold (page 16, lines 6-8).

Claim 52 recites a computer-implemented method that comprises identifying a document

that is stored on a server in a network and that includes links to linked documents (Fig. 6, 610;

page 12, line 16 - page 13, line 4); determining scores for a plurality of the links in the identified

document (Fig. 6, 630; page 13, lines 10-16); comparing the determined scores to a threshold

(page 16, lines 6-8); deleting one of the plurality of links from the identified document when the

score for the one of the links falls below the threshold (page 16, lines 6-8); and providing, to a

user, the identified document without the deleted link (Fig. 6, 670; page 16, line 18 - page 17,

line 3).

Claim 53 recites that the links in the identified document point to a plurality of linked

documents (page 13, lines 11-12); and that determining the scores includes for each of the linked

documents, determining scores for one or more linking documents that contain links to the linked

document (page 13, lines 18-19), determining a score for each of the linked documents based on

the scores of the one or more linking documents (page 13, lines 18-19), and associating the

determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 54 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes determining a clickthrough rate for each of the linked documents (page 14, lines 3-7), determining a score for each of the linked documents based on the determined clickthrough rates (page 14, lines 3-7), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 55 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes determining a measure of popularity associated with each of the linked documents (page 14, lines 8-12), determining a score for each of the linked documents based on the determined measure of popularity (page 14, lines 8-12), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 58 recites determining additional information regarding a linked document pointed to by the one of the plurality of links when the score for the one of the links does not fall below the threshold (page 16, lines 9-15); and providing the identified document with the additional information to the user (page 16, line 18 - page 17, line 3).

Claim 59 recites a system that comprises means for identifying a document based on an address associated with the document, the document including links that point to linked documents (Fig. 1, 110; Fig. 2; page 12, line 16 - page 13, line 4); means for determining scores for a plurality of the links in the identified document (Fig. 1, 110; Fig. 2; page 13, lines 10-16);

means for comparing the determined scores to a threshold (Fig. 1, 110; Fig. 2; page 16, lines 12-13); means for determining that a score for one of the plurality of links is greater than the threshold (Fig. 1, 110; Fig. 2; page 16, lines 12-13); means for determining additional information regarding the linked document pointed to by the one of the plurality of links (Fig. 1, 110; Fig. 2; page 16, lines 9-15); and means for providing the identified document with the additional information to a user (Fig. 1, 110; Fig. 2; page 16, line 18 - page 17, line 3).

Claim 60 recites that the system further comprises means for determining that a score for another one of the plurality of links is not greater than the threshold (Fig. 1, 110; Fig. 2; page 16, lines 6-8); means for deleting the other one of the plurality of links from the identified document (Fig. 1, 110; Fig. 2; page 16, lines 6-8); and means for providing, to a user, the identified document without the deleted link (Fig. 1, 110; Fig. 2; page 16, line 18 - page 17, line 3).

Claim 61 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and wherein the means for determining the scores includes means for determining, for each of the linked documents, scores for one or more linking documents that contain links to the linked document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13, lines 18-19; page 15, lines 5-14), means for determining a score for each of the linked documents based on the scores of the one or more linking documents (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13, lines 18-19; page 15, lines 5-14), and means for associating the determined scores for the linked documents with the corresponding links in the identified document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13, lines 10-12; page 15, lines 5-14).

Claim 62 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and wherein the means for determining the scores includes

means for determining a clickthrough rate for each of the linked documents (Fig. 1, 110, 120;

Fig. 2; Fig. 5; page 14, lines 3-7; page 15, lines 5-14), means for determining a score for each of

the linked documents based on the determined clickthrough rates (Fig. 1, 110, 120; Fig. 2; Fig. 5;

page 14, lines 3-7; page 15, lines 5-14), and means for associating the determined scores for the

linked documents with the corresponding links in the identified document (Fig. 1, 110, 120; Fig.

2; Fig. 5; page 13, lines 10-12; page 15, lines 5-14).

 Claim 63 recites that the links in the identified document point to a plurality of linked

documents (page 13, lines 11-12); and wherein the means for determining the scores includes

means for determining a measure of popularity associated with each of the linked documents

(Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, lines 8-12; page 15, lines 5-14), means for determining

a score for each of the linked documents based on the determined measure of popularity (Fig. 1,

110, 120; Fig. 2; Fig. 5; page 14, lines 8-12; page 15, lines 5-14), and means for associating the

determined scores for the linked documents with the corresponding links in the identified

document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13, lines 10-12; page 15, lines 5-14).

 Claim 64 recites that the links in the identified document point to a plurality of linked

documents (page 13, lines 11-12); and wherein the means for determining the scores includes

means for receiving input from the user (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, line 13 - page

15, line 2; page 15, lines 5-14), means for determining a score for each of the linked documents

based on the received input (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, line 13 - page 15, line 2;

page 15, lines 5-14), and means for associating the determined scores for the linked documents

with the corresponding links in the identified document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13,

lines 10-12; page 15, lines 5-14).

Claim 65 recites that the means for determining the score for each of the linked documents includes means for comparing, for each of the linked documents, one or more words of the received input with a content of the linked document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, line 13 - page 15, line 2; page 15, lines 5-14), and means for determining a score for the linked document based on a degree of match between the one or more words and the content of the linked document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, line 13 - page 15, line 2; page 15, lines 5-14).

Claim 66 recites that the additional information includes an excerpt from the linked document (page 16, lines 13-15), a size of the linked document (page 16, lines 13-15), or a date of last modification of the linked document (page 16, lines 13-15).

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A.   Claims 39, 41, 44-53, 56-61, and 64-66 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Arthurs in view of Pant et al.

B.   Claims 42, 43, 54, 55, 62, and 63 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Arthurs in view of Pant et al. and Page.

VII.   ARGUMENT

A.   **The Rejection Under 35 U.S.C. § 103(a) Based on Arthurs (U.S. Patent No. 6,591,261) in View of Pant et al. (U.S. Patent No. 6,012,053) Should be Reversed.**

The initial burden of establishing a prima facie basis to deny patentability to a claimed invention is always upon the Examiner. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed.

Cir. 1992). In rejecting a claim under 35 U.S.C. § 103, the Examiner must provide a factual

basis to support the conclusion of obviousness. In re Warner, 379 F.2d 1011, 154 USPQ 173

(CCPA 1967). Based upon the objective evidence of record, the Examiner is required to make

the factual inquiries mandated by Graham v. John Deere Co., 86 S.Ct. 684, 383 U.S. 1, 148

USPQ 459 (1966). KSR International Co. v. Teleflex Inc., 550 U.S. _____ (April 30, 2007).

The Examiner is also required to explain how and why one having ordinary skill in the art would

have been led to modify an applied reference and/or combine applied references to arrive at the

claimed invention. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed.

Cir. 1988).

> 1.   Claims 39, 44, and 45.

Independent claim 39 is directed to a computer-implemented method that comprises

identifying a document that is stored on a server in a network and that includes links to linked

documents; determining scores for a plurality of the links in the identified document; modifying

the identified document based on the determined scores, where the modifying includes

reordering at least two of the links based on the determined scores or sorting at least two of the

links based on the determined scores; and providing the modified document to a user.

Neither Arthurs nor Pant et al., whether taken alone or in any reasonable combination,

discloses or suggests the combination of features recited in claim 39. For example, Arthurs and

Pant et al. do not disclose or suggest determining scores for a plurality of links in an identified

document that is stored on a server in a network. The Examiner alleged that Arthurs discloses

this feature and cited column 6, line 19 - column 7, line 3, of Arthurs for support. Final Office

Action, page 3.   Appellants submit that the disclosure of Arthurs provides no support for the

Examiner's allegation.

At column 6, line 19 - column 7, line 3, Arthurs discloses:

In addition to the association database, a content database is created to store sites' content
(as opposed to the association database that is used to determine a site's relationship to
other sites) as illustrated in FIG. 4. The content database typically includes information
relating to the content of a web page. Specifically, the words residing within the web
pages that have been uncovered during the spidering process, and the pages on which
those words reside are stored in the database at step 30. Relevance is determined based on
the frequency and location that a word resides on a web page, and is subsequently stored
in the content database at step 32. The title and description of each web page is further
stored in the database at step 34. It is to be understood that the association and content
databases may be implemented by any conventional or other databases or storage
structures, and may include any type of information.

Once the association and content databases are created, the search engine processes
search requests and provides results as illustrated, by way of example only, in FIG. 5.
Specifically, the server computer system spiders the Web at step 40, and creates the
association and content databases as described above at step 42. The Web is spidered at
predetermined time intervals (e.g., continuously, hourly, daily, etc.) to continually refresh
the association and content databases. An end-user typically visits, via the end-user
computer system and corresponding browser, a search engine web site residing on the
server computer system to enter a search query at step 44, preferably in the form of a
word or phrase. The search engine accesses the content database at step 46 to find sites
having a title and description matching the word or phrase. An initial ranking of sites is
determined using word or phrase relevance as described above. Once the ranked sites are
identified, the association database is accessed at step 48 to find web sites corresponding
to the identified sites that are considered to be related because of their frequency of being
linked to or from common web pages.

Each web site of the search results (e.g., the web sites identified by the content database)
is retrieved at step 50, and relationships between that site and other sites in the search
results are determined at step 52 from information stored in the association database. The
weight or score for the retrieved web site is adjusted at step 54 based upon the
relationship values in the association database for each determined relationship for that
site. In other words, each relationship identified for the retrieved site increments the
weighting of the score. When each of the search result web sites have been processed as
determined at step 56, the search results are ranked in accordance with their score and
displayed at the end-user computer system at step 58. The web sites attaining the greatest
scores are displayed ahead of the other web sites.

In this section, Arthurs discloses that a search engine, in response to a received search query,

accesses a content database to find web sites that match the search query and ranks the web sites

using word or phrase relevance to form search results. Arthurs also discloses adjusting the

weight or score for a web site, corresponding to a search result, based on relationship values in

an association database for each determined relationship for that web site.

The Examiner appears to be alleging that the list of search results is a document that

includes links to linked documents. Appellants submit that the list of search results is not <u>an</u>

<u>identified document that is stored on a server in a network</u>, as recited in claim 39. In other

words, nowhere does <u>Arthurs</u> disclose or remotely suggest <u>identifying</u> the list of search results

that is stored on a server in a network, as recited in claim 39.

When addressing this feature of claim 39, the Examiner did not point to the list of search

results as a document that is stored on a server in a network that includes links to linked

documents, but instead pointed to web pages that are encountered by a spidering program. Final

Office Action, page 3. Nowhere does <u>Arthurs</u> disclose or remotely suggest that this spidering

program encounters a list of search results. Further, nowhere does <u>Arthurs</u> disclose or remotely

suggest determining scores for a plurality of the links in the web pages encountered by the

spidering program.

Therefore, <u>Arthurs</u> does not disclose or remotely suggest determining scores for a

plurality of links in an identified document that is stored on a server in a network, as recited in

claim 39. <u>Pant et al.</u> also does not disclose or suggest this feature of claim 39.

In the Advisory Action, the Examiner alleged:

Applicant's primary argument is that Arthurs is not disclosing a "document" identifying
the list of search results. However as defined by Applicant within the specifications in the
prior art description, a "document" may be defined as any type of document such as a
web document (e.g., a web page) that may be found on the World Wide Web. Via a end-
user computer computer sysyem, Arthurs displays a listing of links with the associated
page containing that link, whereby the link and the page are uniquely associated (col. 4,
lines 1-24). Aurther further discloses when sufficient websites have been traversed, the
recorded information is stored in association and content databases. Therefore the

Examiner concludes that Arthurs' list of search results are displayed within a "document".
At the time of the invention, it was commonly known that web documents are typically
stored within a database on a server or the user's computer.

Advisory Action, page 2. Appellants submit that the Examiner has totally misconstrued the

disclosure of Arthurs.

At column 4, lines 1-24, Arthurs discloses:

There are numerous conventional techniques and parameters by which spidering can be
accomplished, and it is to be understood that virtually any manner of traversing numerous
web pages across numerous sites on the World Wide Web (WWW) or other network can
be utilized by the present invention for the processing discussed below. As web pages are
encountered or retrieved during the spidering process at step 10, the code comprising
each web page (e.g., HTML code) is parsed at step 12 to record its links and other page
information (e.g., words, title, description, etc.). A listing is constructed containing an id
(e.g., web page identifier) for, and all the links of, each web page, whereby the links of
each web page are associated with the corresponding id. In other words, this is a listing of
links with the associated page containing that link, whereby the link and page are
uniquely associated. The listing can be sorted by various conventional techniques and
there exist numerous ways of using abbreviations or shorthand notation to distinguish
web sites and their links. The relationship of links to the parsed pages and the order of the
links within a web site are maintained. When sufficient web sites have been traversed as
determined at step 14, the recorded information is stored in association and content
databases at step 16 for use in determining relevancy as described below.

Clearly, in this section, Arthurs discloses crawling web pages located on the web. It is well

known that web pages on the web include links to other web pages. Search result documents are

not web pages that are crawled on the web. Thus, the Examiner's argument that Arthurs is

describing search result documents in this section is unsupported by Arthurs' disclosure.

It is also well known that a search result document does not become a document (i.e.,

formed into an HTML document) until after the search results have been processed and the

search results are ready to be sent to the user. Pant et al. makes this clear at column 6, lines 12-

15. Arthurs infers this as well by disclosing that when each of the search result web sites have

been processed, the search results are ranked in accordance with their score and displayed at the

end-user computer system. Arthurs does not actually describe the inferred step of forming the

search results into an HTML document prior to sending the search results for display on the end-

user computer system--probably because this is generally understood in the art. Thus, the

Examiner's argument that Arthurs is describing search result documents in the above-identified

section of Arthurs is unsupported by Arthurs' disclosure.

Arthurs and Pant et al. also do not disclose or suggest modifying the identified document

based on the determined scores, where the modifying includes reordering at least two of the links

in the identified document based on the determined scores, or sorting at least two of the links in

the identified document based on the determined scores, as further recited in claim 39.

The Examiner admitted that Arthurs does not disclose or suggest these features, but

alleged that Pant et al. discloses these features and cited column 2, lines 25-43, and column 3,

lines 56-63, of Pant et al. for support. Final Office Action, page 3. Appellants submit that the

disclosure of Pant et al. provides no support for the Examiner's allegation.

At column 2, lines 25-43, Pant et al. discloses:

> Accordingly, one aspect of the present invention is a computer system for providing user-
> controllable relevance ranking of search results from a query on a collection of items of
> information. The computer system includes a relevance determination module having a
> first input for receiving a set of search results from a query indicating items in the
> collection matching the query, a second input for receiving an indication of relevance
> factors specified by a user, and a third input for receiving information about the items in
> the set of search results to which relevance factors may be applied. This module has an
> output for providing an indication of a score indicative of relevance for each of the items
> in the set of search results. A sorting module has an input which receives the score
> associated with each item and an indication of the set of search results, and an output
> providing to the user an indication of the items in the set of search results in an order
> ranked according to the relevance score of each item.

In this section, Pant et al. discloses a relevance determination module that provides a score

indicative of the relevance of each item in a set of search results and a sorting module that ranks

the items based on their relevance scores. Appellants submit that the relevance determination

module and the sorting module are not operating upon links in an identified document that is

stored on a server in a network, but instead are operating upon items in a set of search results.

These search results are <u>not</u> an identified document that is stored on a server in a network, as

recited in claim 39. <u>Pant et al.</u> specifically discloses that the search results are not formed into an

HTML document until after the search results are scored and ranked. Column 5, line 61 - col. 6,

line 15. Therefore, <u>Pant et al.</u> does not disclose or suggest modifying <u>the identified document</u>

based on the determined scores, where the modifying includes reordering <u>at least two of the links</u>

<u>in the identified document</u> based on the determined scores, or sorting <u>at least two of the links in</u>

<u>the identified document</u> based on the determined scores, as recited in claim 39.

At column 3, lines 56-63, <u>Pant et al.</u> discloses:

Another embodiment is shown in FIG. 2. In this computer system 130, the search results
110 do not include a score with each item. Therefore, the relevance determination module
128 outputs scores 124 separately for each item in the search results. Both the search
results 110 and the list of scores 124 are used by the sorting module 124 to produce
ranked results for the user. The embodiment is otherwise the same as shown in FIG. 1.

In this section, <u>Pant et al.</u> discloses a relevance determination module that outputs scores

separately for each item in the search results. Appellants submit that the relevance determination

module is not operating upon links in an identified document that is stored on a server in a

network, but instead is operating upon items in a set of search results. <u>Pant et al.</u> specifically

discloses that the search results are not formed into an HTML document until after the search

results are scored and ranked. Column 5, line 61 - col. 6, line 15. Therefore, <u>Pant et al.</u> does not

disclose or suggest modifying <u>the identified document</u> based on the determined scores, where the

modifying includes reordering <u>at least two of the links in the identified document</u> based on the

determined scores, or sorting at least two of the links in the identified document based on the

determined scores, as recited in claim 39.

For at least these reasons, it is respectfully submitted that claims 39, 44, and 45 are

patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination,

under 35 U.S.C. § 103. Reversal of the rejection of claims 39, 44, and 45 is respectfully

requested.

> 2.   Claim 41.

Dependent claim 41 recites that the links in the identified document point to a plurality of

linked documents; and that determining the scores includes for each of the linked documents,

determining scores for one or more linking documents that contain links to the linked document,

determining a score for each of the linked documents based on the scores of the one or more

linking documents, and associating the determined scores for the linked documents with the

corresponding links in the identified document.

Initially, claim 41 depends from claim 39. Therefore, claim 41 is patentable over Arthurs

and Pant et al., whether taken alone or in any reasonable combination, for at least the reasons

given with regard to claim 39.

Further, Arthurs and Pant et al. do not disclose or suggest the combination of features

recited in claim 41. For example, Arthurs and Pant et al. do not disclose or suggest determining

a score for each of the linked documents based on the scores of the one or more linking

documents.

The Examiner alleged that Arthurs discloses this feature and cited column 7, line 47 -

column 8, line 63, and column 6, line 19 - column 7, line 3, of Arthurs for support. Final Office

Action, page 4. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the

Examiner's allegation.

At column 7, line 47 - column 8, line 63, <u>Arthurs</u> discloses performing a search, returning

search results, and then refining the search results or displaying associated web sites. Nowhere

in this section, or elsewhere, does <u>Arthurs</u> disclose or suggest determining a score for each of the

linked documents based on the scores of the one or more linking documents, as recited in claim

41. Instead, <u>Arthurs</u> discloses that sites are scored using word or phrase relevance to a search

query. Column 6, lines 43-51.

At column 6, line 19 - column 7, line 3, <u>Arthurs</u> discloses that sites are scored using word

or phrase relevance to a search query and the score is adjusted based upon the relationship values

in the association database for each determined relationship site. <u>Arthurs</u> discloses that two sites

are related if a web site lists both sites. Column 4, lines 60-63. Nowhere in this section, or

elsewhere, does <u>Arthurs</u> disclose or suggest determining a score for each of the linked

documents based on the scores of the one or more linking documents, as recited in claim 41.

For at least these reasons, it is respectfully submitted that claim 41 is patentable over

<u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. §

103. Reversal of the rejection of claim 41 is respectfully requested.

3.   Claim 46.

Dependent claim 46 recites that modifying the identified document includes comparing

the determined scores to a threshold, and deleting one of the links from the identified document

when the determined score for the one of the links falls below the threshold.

Initially, claim 46 depends from claim 39. Therefore, claim 46 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 39.

Further, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest the combination of features recited in claim 46. For example, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest deleting one of the links from the identified document when the determined score for the one of the links falls below a threshold.

The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 2, lines 14-23, column 6, lines 5-16, and column 10, lines 34-36, of <u>Arthurs</u> for support. Final Office Action, page 7. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation.

At column 2, lines 14-23, <u>Arthurs</u> discloses:

Upon "spidering" the Web (e.g., traversing substantially the entire Web by following links between web pages), groupings of web sites can be determined by setting threshold values for sites that are linked by common web sites. The greater the quantity of common links in a grouping and the closer the proximity of the links to one another, the closer the relationship between the grouping of sites. A statistically accurate assumption can be made as to validity of a grouping of sites by setting threshold values for the quantity of common links.

In this section, <u>Arthurs</u> discloses grouping web sites by setting threshold values for sites that are linked by common web sites. Other than mentioning the word "threshold," this section of <u>Arthurs</u> has absolutely nothing to do with deleting one of the links from an identified document when the determined score for the one of the links falls below a threshold, as recited in claim 46.

At column 6, lines 5-16, <u>Arthurs</u> discloses:

Accordingly, the association database is pared or culled to contain only those associations of sites that are deemed to meet or exceed a particular threshold. The value of the

> threshold varies depending upon the convention used to determine association or
> relationship values or, more particularly, upon the number of associations determined for
> a given site and the overall total number of associations. The association database may
> preserve associations based on various criteria, such as an association or relationship
> value exceeding some predetermined threshold, a particular number of associations for
> each entry or some other technique or combination of techniques.

In this section, Arthurs discloses using a threshold to determine whether to preserve associations

in the association database. Other than mentioning the word "threshold," this section of Arthurs

has absolutely nothing to do with deleting one of the links from an identified document when the

determined score for the one of the links falls below a threshold, as recited in claim 46.

Preserving associations with an association or relationship value exceeding a threshold is not

remotely similar to deleting one of the links from an identified document when the determined

score for the one of the links falls below a threshold, as recited in claim 46.

At column 10, lines 34-36, Arthurs discloses:

> The association database may utilize any threshold values or schemes based on any
> stored data to remove data from the database.

In this section, Arthurs discloses that the association database may use a threshold to remove

data from the database. Other than mentioning the word "threshold," this section of Arthurs has

absolutely nothing to do with deleting one of the links from an identified document when the

determined score for the one of the links falls below a threshold, as recited in claim 46. Using a

threshold to determine whether to remove data from a database is not remotely similar to

deleting one of the links from an identified document when the determined score for the one of

the links falls below a threshold, as recited in claim 46.

The Examiner also alleged that, at the time of the invention, it would have been obvious

to one of ordinary skill in the art to modify the disclosure of Arthurs to delete one of the links

from the identified document when the determine score for the one of the links falls below the threshold. Final Office Action, pages 7-8. Appellants submit that there is no merit to the Examiner's allegation. The Examiner's allegation is merely conclusory and the Examiner provides no explanation as to why it would have been obvious to modify the disclosure of Arthurs in the manner suggested by the Examiner.

For at least these reasons, it is respectfully submitted that claim 46 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 46 is respectfully requested.

4.   Claim 47.

Independent claim 47 is directed to a computer-implemented method that comprises receiving a search query; providing a list of search results in response to the search query; receiving selection of one of the search results in the list of search results; identifying links in a document corresponding to the selected search result; determining a score for one of the links based on a degree of match between the search query and a content of a linked document pointed to by the one of the links; modifying the document based on the determined score for the one of the links; and providing the modified document.

Arthurs and Pant et al., whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 47. For example, Arthurs and Pant et al. do not disclose or suggest determining a score for one of the links in a document corresponding to a selected search result based on a degree of match between the search query and a content of a linked document pointed to by the one of the links.

The Examiner alleged that Arthurs discloses these features and cited column 6, line 19 -

column 7, line 3, of <u>Arthurs</u> for support. Final Office Action, page 8. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation.

Column 6, line 19 - column 7, line 3, of <u>Arthurs</u> is reproduced above. In this section, <u>Arthurs</u> discloses that a search engine, in response to a received search query, accesses a content database to find web sites that match the search query and ranks the web sites using word or phrase relevance to form search results. <u>Arthurs</u> also discloses adjusting the weight or score for a web site, corresponding to a search result, based on relationship values in an association database for each determined relationship for that web site.

The Examiner appears to be alleging that the list of search results is a document corresponding to a selected search result. Appellants submit that this is an unreasonable interpretation of <u>Arthurs</u>. The list of search results is not <u>a document corresponding to a selected search result</u>, as recited in claim 47.

When addressing this feature of claim 47, the Examiner did not point to the list of search results as a document corresponding to a selected search result, but instead pointed to a web site that is retrieved and displayed by selecting a link. Final Office Action, page 8. Nowhere does <u>Arthurs</u> disclose or remotely suggest determining a score for a link in this web site, let alone determining the score based on a degree of match between a search query and a content of a linked document pointed to by the link. Thus, <u>Arthurs</u> does not disclose or remotely suggest determining a score for one of the links in a document corresponding to a selected search result based on a degree of match between the search query and a content of a linked document pointed to by the one of the links, as recited in claim 47. <u>Pant et al.</u> also does not disclose or suggest these features of claim 47.

For at least these reasons and the reasons given with regard to claim 39, it is respectfully submitted that claim 47 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 47 is respectfully requested.

       5.   Claim 48.

Dependent claim 48 recites that that determining the score for the one of the links includes determining scores for each of a plurality of the links in the document based on a degree of match between the search query and a content of a linked document pointed to by the link; and modifying the document includes reordering the links based on the determined scores.

Initially, claim 48 depends from claim 47. Therefore, claim 48 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 47.

Further, Arthurs and Pant et al. do not disclose or suggest the combination of features recited in claim 48. For example, Arthurs and Pant et al. do not disclose or suggest reordering the links in a document, corresponding to a selected search result, based on the determined scores.

The Examiner alleged that Pant et al. discloses this feature and cited column 2, lines 25-43, and column 3, lines 56-63, of Pant et al. for support. Final Office Action, page 10. Appellants submit that the disclosure of Pant et al. provides no support for the Examiner's allegation.

At column 2, lines 25-43, Pant et al. discloses:

Accordingly, one aspect of the present invention is a computer system for providing user-controllable relevance ranking of search results from a query on a collection of items of

information. The computer system includes a relevance determination module having a
first input for receiving a set of search results from a query indicating items in the
collection matching the query, a second input for receiving an indication of relevance
factors specified by a user, and a third input for receiving information about the items in
the set of search results to which relevance factors may be applied. This module has an
output for providing an indication of a score indicative of relevance for each of the items
in the set of search results. A sorting module has an input which receives the score
associated with each item and an indication of the set of search results, and an output
providing to the user an indication of the items in the set of search results in an order
ranked according to the relevance score of each item.

In this section, Pant et al. discloses a relevance determination module that provides a score that

is indicative of relevance of each of the items in a set of search results, and a sorting module that

ranks the items in the set of search results according to their relevance scores. Appellants submit

that the set of search results is not a document corresponding to a selected search result. In fact,

Pant et al. specifically discloses that the set of search results is not formed into a document until

after the items in the set of search results are ranked by the sorting module. Column 6, lines 10-

15. Thus, Pant et al. does not disclose or suggest reordering the links in a document,

corresponding to a selected search result, based on the determined scores, as recited in claim 48.

At column 3, lines 56-63, Pant et al. discloses:

Another embodiment is shown in FIG. 2. In this computer system 130, the search results
110 do not include a score with each item. Therefore, the relevance determination module
128 outputs scores 124 separately for each item in the search results. Both the search
results 110 and the list of scores 124 are used by the sorting module 124 to produce
ranked results for the user. The embodiment is otherwise the same as shown in FIG. 1.

In this section, Pant et al. discloses a relevance determination module that provides a score for

each of the items in a set of search results, and a sorting module that ranks the items in the set of

search results according to their scores. Appellants submit that the set of search results is not a

document corresponding to a selected search result. In fact, Pant et al. specifically discloses that

the set of search results is not formed into a document until after the items in the set of search

results are ranked by the sorting module. Column 6, lines 10-15. Thus, <u>Pant et al.</u> does not

disclose or suggest reordering the links in a document, <u>corresponding to a selected search result</u>,

based on the determined scores, as recited in claim 48.

For at least these reasons, it is respectfully submitted that claim 48 is patentable over

<u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. §

103. Reversal of the rejection of claim 48 is respectfully requested.

    6. Claim 49.

Dependent claim 49 recites that reordering the links includes sorting the links based on

the determined scores.

Initially, claim 49 depends from claim 48. Therefore, claim 49 is patentable over <u>Arthurs</u>

and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons

given with regard to claim 48.

Further, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest the combination of features

recited in claim 48.

The Examiner admitted that <u>Arthurs</u> does not disclose this feature, but alleged that <u>Pant</u>

<u>et al.</u> discloses this feature and cited column 2, lines 25-43, and column 3, lines 56-63, of <u>Pant et</u>

<u>al.</u> for support. Final Office Action, pages 10-11. Appellants submit that the disclosure of <u>Pant</u>

<u>et al.</u> provides no support for the Examiner's allegation.

Column 2, lines 25-43, of <u>Pant et al.</u> is reproduced above. In this section, <u>Pant et al.</u>

discloses a relevance determination module that provides a score that is indicative of relevance

of each of the items in a set of search results, and a sorting module that ranks the items in the set

of search results according to their relevance scores. Appellants submit that the set of search

results is not a document corresponding to a selected search result. In fact, <u>Pant et al.</u> specifically discloses that the set of search results is not formed into a document until after the items in the set of search results are ranked by the sorting module. Column 6, lines 10-15. Thus, <u>Pant et al.</u> does not disclose or suggest sorting the links in a document, <u>corresponding to a</u> <u>selected search result</u>, based on the determined scores, as recited in claim 49.

Column 3, lines 56-63, of <u>Pant et al.</u> is reproduced above. In this section, <u>Pant et al.</u> discloses a relevance determination module that provides a score for each of the items in a set of search results, and a sorting module that ranks the items in the set of search results according to their scores. Appellants submit that the set of search results is not a document corresponding to a selected search result. In fact, <u>Pant et al.</u> specifically discloses that the set of search results is not formed into a document until after the items in the set of search results are ranked by the sorting module. Column 6, lines 10-15. Thus, <u>Pant et al.</u> does not disclose or suggest sorting the links in a document, <u>corresponding to a selected search result</u>, based on the determined scores, as recited in claim 49.

For at least these reasons, it is respectfully submitted that claim 49 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 49 is respectfully requested.

7.   Claim 50.

Dependent claim 50 recites that that modifying the document includes changing at least one visual characteristic of the one of the links within the document based on the determined score.

Initially, claim 50 depends from claim 47. Therefore, claim 50 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 47.

Further, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest the combination of features recited in claim 50.

The Examiner admitted that <u>Arthurs</u> does not disclose this feature, but alleged that <u>Pant et al.</u> discloses this feature and cited column 6, line 50 – column 7, line 50, of <u>Pant et al.</u> for support. Final Office Action, page 11. Appellants submit that the disclosure of <u>Pant et al.</u> provides no support for the Examiner's allegation.

At column 6, line 50 – column 7, line 50, <u>Pant et al.</u> discloses various relevance factors that can be used to score a document corresponding to an item in a set of search results, including the position of search terms in the document, the frequency of occurrence of a search term in the document, the frequency of occurrence of a search term in all documents, the number of search terms found in the document, the ordering of search terms in the document, the pairwise distance between search terms in the document, and the length of search words. Nowhere in this section, or elsewhere, does <u>Pant et al.</u> disclose or suggest changing at least one visual characteristic of one of the links within a document, <u>corresponding to a selected search result</u>, based on the determined score, as recited in claim 50.

Instead, at best, <u>Pant et al.</u> discloses annotating a search result link corresponding to an item in a set of search results. Fig. 7; column 13, lines 9-17. As explained above, <u>Pant et al.</u> specifically discloses that the set of search results is not formed into a document until after the items in the set of search results are ranked by the sorting module. Column 6, lines 10-15. Thus,

Pant et al. does not disclose or suggest changing at least one visual characteristic of one of the links within a document, corresponding to a selected search result, based on the determined score, as recited in claim 50.

For at least these reasons, it is respectfully submitted that claim 50 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 50 is respectfully requested.

8.   Claim 51.

Dependent claim 51 recites comparing the determined score to a threshold; and deleting the one of the links when the determined score for the one of the links falls below a threshold.

Initially, claim 51 depends from claim 47. Therefore, claim 51 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 47.

Further, Arthurs and Pant et al. do not disclose or suggest the combination of features recited in claim 51. For example, Arthurs and Pant et al. do not disclose or suggest deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold.

The Examiner alleged that Arthurs discloses this feature and cited column 2, lines 14-23, column 6, lines 5-16, and column 10, lines 34-36, of Arthurs for support. Final Office Action, page 12. Appellants submit that the disclosure of Arthurs provides no support for the Examiner's allegation.

Column 2, lines 14-23, of Arthurs is reproduced above. In this section, Arthurs discloses grouping web sites by setting threshold values for sites that are linked by common web sites.

Other than mentioning the word "threshold," this section of <u>Arthurs</u> has absolutely nothing to do with deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51.

Column 6, lines 5-16, of <u>Arthurs</u> is reproduced above. In this section, <u>Arthurs</u> discloses using a threshold to determine whether to preserve associations in the association database. Other than mentioning the word "threshold," this section of <u>Arthurs</u> has absolutely nothing to do with deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51. Preserving associations with an association or relationship value exceeding a threshold is not remotely similar to deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51.

Column 10, lines 34-36, of <u>Arthurs</u> is reproduced above. In this section, <u>Arthurs</u> discloses that the association database may use a threshold to remove data from the database. Other than mentioning the word "threshold," this section of <u>Arthurs</u> has absolutely nothing to do with deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51. Using a threshold to determine whether to remove data from a database is not remotely similar to deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51.

The Examiner also alleged that, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the disclosure of <u>Arthurs</u> to delete one of the links

from the identified document when the determine score for the one of the links falls below the threshold. Final Office Action, page 12. Appellants submit that there is no merit to the Examiner's allegation. The Examiner's allegation is merely conclusory and provides no explanation as to why it would have been obvious to modify the disclosure of <u>Arthurs</u> in the manner suggested by the Examiner.

For at least these reasons, it is respectfully submitted that claim 51 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 51 is respectfully requested.

9.　　Claims 52, 56, and 57.

Independent claim 52 is directed to a computer-implemented method that comprises identifying a document that is stored on a server in a network and that includes links to linked documents; determining scores for a plurality of the links in the identified document; comparing the determined scores to a threshold; deleting one of the plurality of links from the identified document when the score for the one of the links falls below the threshold; and providing, to a user, the identified document without the deleted link.

Initially, Appellants submit that the Examiner's rejection of claim 52 is improper. The Examiner rejected claim 52 under 35 U.S.C. § 103(a) as allegedly unpatentable over <u>Arthurs</u> and <u>Pant et al.</u> Final Office Action, page 2. In the body of the rejection, however, the Examiner alleged that <u>Arthurs</u> discloses all of the features of the claim. Final Office Action, pages 12-13. The Examiner did not rely on any portion of <u>Pant et al.</u> and did not provide a motivation statement for combining the disclosures of <u>Arthurs</u> and <u>Pant et al.</u> Thus, the Examiner's rejection is improper and the Examiner did not establish a prima facie case of obviousness based on

<u>Arthurs</u> and <u>Pant et al.</u>

Nevertheless, <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 52. For example, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest determining scores for a plurality of links in an identified document that is stored on a server in a network.

The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 6, line 19 - column 7, line 3, of <u>Arthurs</u> for support. Final Office Action, page 13. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation for at least reasons similar to the reasons given with regard to claim 39.

<u>Arthurs</u> and <u>Pant et al.</u> also do not disclose or suggest deleting one of the plurality of links from an identified document that is stored on a server in a network when the score for the one of the links falls below a threshold, as further recited in claim 52.

The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 2, lines 14-23, column 6, lines 5-16, and column 10, lines 34-36, of <u>Arthurs</u> for support. Final Office Action, page 13. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation for at least reasons similar to the reasons given with regard to claim 46.

For at least these reasons, it is respectfully submitted that claims 52, 56, and 57 are patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claims 52, 56, and 57 is respectfully requested.

      10.   Claim 53.

Dependent claim 53 recites that the links in the identified document point to a plurality of linked documents; and that determining the scores includes for each of the linked documents, determining scores for one or more linking documents that contain links to the linked document, determining a score for each of the linked documents based on the scores of the one or more linking documents, and associating the determined scores for the linked documents with the corresponding links in the identified document.

Initially, claim 53 depends from claim 52. Therefore, claim 53 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 52.

Further, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest the combination of features recited in claim 53. For example, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest determining a score for each of the linked documents based on the scores of the one or more linking documents.

The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 7, line 47 - column 8, line 63, and column 6, line 19 - column 7, line 3, of <u>Arthurs</u> for support. Final Office Action, page 14. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation for at least reasons similar to reasons given with regard to claim 41.

For at least these reasons, it is respectfully submitted that claim 53 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 53 is respectfully requested.

      11.   Claim 58.

Dependent claim 58 recites determining additional information regarding a linked document pointed to by the one of the plurality of links when the score for the one of the links does not fall below the threshold; and providing the identified document with the additional information to the user.

Initially, claim 58 depends from claim 52. Therefore, claim 58 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 52.

Further, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest the combination of features recited in claim 58. For example, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest providing, to the user, a document that is stored on a server in a network with additional information regarding a linked document pointed to by one of a plurality of links in the document when the score for one of the links does not fall below a threshold.

The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 2, lines 14-23, and column 6, line 5 - column 7, line 3, of <u>Arthurs</u> for support. Final Office Action, page 15. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation.

Column 2, lines 14-23, of <u>Arthurs</u> is reproduced above. In this section, <u>Arthurs</u> discloses grouping web sites by setting threshold values for sites that are linked by common web sites. Other than mentioning the word "threshold," this section of <u>Arthurs</u> has absolutely nothing to do with providing, to the user, a document that is stored on a server in a network with additional information regarding a linked document pointed to by one of a plurality of links in the

document when the score for one of the links does not fall below a threshold, as recited in claim 58.

At column 6, line 5 - column 7, line 3, Arthurs discloses that a search engine, in response to a received search query, accesses a content database to find web sites that match the search query and ranks the web sites using word or phrase relevance to form search results. Arthurs also discloses adjusting the weight or score for a web site, corresponding to a search result, based on relationship values in an association database for each determined relationship for that web site.

The Examiner appears to be alleging that the list of search results is a document that includes links to linked documents. Appellants submit that the list of search results is not a document that is identified as stored on a server in a network, as recited in claim 58. In other words, nowhere does Arthurs disclose or remotely suggest identifying the list of search results as a document stored on a server in a network, as would be recited in claim 58. Thus, Arthurs cannot disclose or suggest providing, to the user, a document that is stored on a server in a network with additional information regarding a linked document pointed to by one of a plurality of links in the document when the score for one of the links does not fall below a threshold, as recited in claim 58.

For at least these reasons, it is respectfully submitted that claim 58 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 58 is respectfully requested.

        12.   Claims 59 and 64-66.

Independent claim 59 is directed to a system that comprises means for identifying a

document based on an address associated with the document, the document including links that point to linked documents; means for determining scores for a plurality of the links in the identified document; means for comparing the determined scores to a threshold; means for determining that a score for one of the plurality of links is greater than the threshold; means for determining additional information regarding the linked document pointed to by the one of the plurality of links; and means for providing the identified document with the additional information to a user.

Initially, Appellants submit that the Examiner's rejection of claim 59 is improper. The Examiner rejected claim 59 under 35 U.S.C. § 103(a) as allegedly unpatentable over Arthurs and Pant et al. Final Office Action, page 2. In the body of the rejection, however, the Examiner alleged that Arthurs discloses all of the features of the claim. Final Office Action, pages 15-16. The Examiner did not rely on any portion of Pant et al. and did not provide a motivation statement for combining the alleged disclosures of Arthurs and Pant et al. Thus, the Examiner's rejection is improper and the Examiner did not establish a prima facie case of obviousness based on Arthurs and Pant et al.

Nevertheless, Arthurs and Pant et al., whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 59. For example, Arthurs and Pant et al. do not disclose or suggest means for determining scores for a plurality of the links in a document identified based on an address associated with the document. The Examiner alleged that Arthurs discloses this feature and cited column 6, line 19 - column 7, line 3, of Arthurs for support. Final Office Action, page 15. Appellants submit that the disclosure of Arthurs provides no support for the Examiner's allegation.

Column 6, line 19 - column 7, line 3, of <u>Arthurs</u> is reproduced above. In this section, <u>Arthurs</u> discloses that a search engine, in response to a received search query, accesses a content database to find web sites that match the search query and ranks the web sites using word or phrase relevance to form search results. <u>Arthurs</u> also discloses adjusting the weight or score for a web site, corresponding to a search result, based on relationship values in an association database for each determined relationship for that web site.

The Examiner appears to be alleging that the list of search results is a document that includes links to linked documents. Appellants submit that the list of search results is not <u>a document that is identified based on an address associated with the document</u>, as recited in claim 59. In other words, nowhere does <u>Arthurs</u> disclose or remotely suggest <u>identifying</u> the list of search results based on an address associated with the list of search results, as recited in claim 59.

When addressing this feature of claim 59, the Examiner did not point to the list of search results as a document that is identified based on an address associated with the document, but instead pointed to web pages that are encountered by a spidering program. Final Office Action, page 15. Nowhere does <u>Arthurs</u> disclose or remotely suggest that this spidering program encounters a list of search results. Further, nowhere does <u>Arthurs</u> disclose or remotely suggest determining scores for a plurality of the links in the web pages encountered by the spidering program.

It is well known that a search result document does not become a document (i.e., formed into an HTML document) until after the search results have been processed and the search results are ready to be sent to the user. <u>Pant et al.</u> makes this clear at column 6, lines 12-15.

Arthurs infers this as well by disclosing that when each of the search result web sites have been processed, the search results are ranked in accordance with their score and displayed at the end-user computer system. Arthurs does not actually describe the inferred step of forming the search results into an HTML document prior to sending the search results for display on the end-user computer system--probably because this is generally understood in the art.

Therefore, Arthurs does not disclose or remotely suggest means for determining scores for a plurality of the links in a document identified based on an address associated with the document, as recited in claim 59. Pant et al. also does not disclose or suggest this feature of claim 59.

Arthurs and Pant et al. also do not disclose or suggest means for providing, to a user, the identified document with additional information regarding the linked document pointed to by one of the plurality of links, as further recited in claim 59.

The Examiner alleged that Arthurs discloses these features and cited column 2, lines 14-23, and column 6, line 5 - column 7, line 3, of Arthurs for support. Final Office Action, page 16. Appellants submit that the disclosure of Arthurs provides no support for the Examiner's allegation for at least reasons similar to reasons given with regard to claim 58.

For at least these reasons, it is respectfully submitted that claims 59 and 64-66 are patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claims 59 and 64-66 is respectfully requested.

        13.   Claim 60.

Dependent claim 60 recites means for determining that a score for another one of the

plurality of links is not greater than the threshold; means for deleting the other one of the plurality of links from the identified document; and means for providing, to a user, the identified document without the deleted link.

Initially, claim 60 depends from claim 59. Therefore, claim 60 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 59.

Further, <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 60. For example, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest means for deleting the other one of the plurality of links from the identified document.

The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 2, lines 14-23, column 6, lines 5-16, and column 10, lines 34-36, of <u>Arthurs</u> for support. Final Office Action, page 16. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation for at least reasons similar to reasons given with regard to claim 46.

For at least these reasons, it is respectfully submitted that claim 60 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 60 is respectfully requested.

      14.   Claim 61.

Dependent claim 61 recites that the links in the identified document point to a plurality of linked documents; and that the means for determining the scores includes means for determining, for each of the linked documents, scores for one or more linking documents that contain links to the linked document, means for determining a score for each of the linked documents based on

the scores of the one or more linking documents, and means for associating the determined

scores for the linked documents with the corresponding links in the identified document.

Initially, claim 61 depends from claim 59. Therefore, claim 61 is patentable over <u>Arthurs</u>

and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons

given with regard to claim 59.

Further, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest the combination of features

recited in claim 61. For example, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest means for

determining a score for each of the linked documents based on the scores of the one or more

linking documents.

The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 7, line 47 -

column 8, line 63, and column 6, line 19 - column 7, line 3, of <u>Arthurs</u> for support. Final Office

Action, page 4. Appellants submit that the disclosure of <u>Arthurs</u> provides no support for the

Examiner's allegation for at least reasons similar to reasons given with regard to claim 41.

For at least these reasons, it is respectfully submitted that claim 61 is patentable over

<u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. §

103. Reversal of the rejection of claim 61 is respectfully requested.

B. **The Rejection Under 35 U.S.C. § 103(a) Based on <u>Arthurs</u> (U.S. Patent No. 6,591,261) in View of <u>Pant et al.</u> (U.S. Patent No. 6,012,053) and <u>Page</u> (U.S. Patent No. 6,285,999) Should be Reversed.**

1.   Claim 42.

Dependent claim 42 recites that the links in the identified document point to a plurality of

linked documents; and that determining the scores includes determining a clickthrough rate for

each of the linked documents, determining a score for each of the linked documents based on the determined clickthrough rates, and associating the determined scores for the linked documents with the corresponding links in the identified document.

Initially, claim 42 depends from claim 39. The disclosure of Page does not cure the deficiencies in the disclosures of Arthurs and Pant et al. identified above with regard to claim 39. Claim 42 is, therefore, patentable over Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 39.

Additionally, Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 42. For example, Arthurs, Pant et al., and Page do not disclose or suggest determining a score for each of the linked documents based on a clickthrough rate for each of the linked documents.

The Examiner admitted that Arthurs and Pant et al. do not disclose or suggest this feature, but alleged that Page discloses determining the popularity of a document. Final Office Action, page 19. The Examiner alleged that determining a clickthrough rate is equivalent to determining the popularity or how many hits the documents has had by other links linking to the document and determining how important that document is. Final Office Action, page 19. Appellants submit that this is an unreasonable allegation based solely on a flawed attempt to reconstruct the claimed invention using impermissible hindsight.

Appellants' specification specifically describes a clickthrough rate of a document as the number of times that users clicked on the document over a period of time. Appellants' specification at page 14, lines 3-7. Appellants submit that it is unreasonable to equate the number of times that users clicked on a document over a period of time to the number of links

linking to the document. Thus, the Examiner's allegation is flawed, as is the Examiner's rejection.

For at least these reasons, it is respectfully submitted that claim 42 is patentable over Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 42 is respectfully requested.

2. Claim 43.

Dependent claim 43 recites that the links in the identified document point to a plurality of linked documents; and that determining the scores includes determining a measure of popularity associated with each of the linked documents, determining a score for each of the linked documents based on the determined measure of popularity, and associating the determined scores for the linked documents with the corresponding links in the identified document.

Claim 43 depends from claim 39. The disclosure of Page does not cure the deficiencies in the disclosures of Arthurs and Pant et al. identified above with regard to claim 39. Claim 43 is, therefore, patentable over Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 39.

For at least these reasons, it is respectfully submitted that claim 43 is patentable over Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 43 is respectfully requested.

3. Claim 54.

Dependent claim 54 recites that the links in the identified document point to a plurality of linked documents; and that determining the scores includes determining a clickthrough rate for each of the linked documents, determining a score for each of the linked documents based on the

determined clickthrough rates, and associating the determined scores for the linked documents
with the corresponding links in the identified document.

Initially, claim 54 depends from claim 52. The disclosure of Page does not cure the
deficiencies in the disclosures of Arthurs and Pant et al. identified above with regard to claim 52.
Claim 54 is, therefore, patentable over Arthurs, Pant et al., and Page, whether taken alone or in
any reasonable combination, for at least the reasons given with regard to claim 52.

Additionally, Arthurs, Pant et al., and Page, whether taken alone or in any reasonable
combination, do not disclose or suggest the combination of features recited in claim 54. For
example, Arthurs, Pant et al., and Page do not disclose or suggest determining a score for each of
the linked documents based on a clickthrough rate for each of the linked documents.

The Examiner admitted that Arthurs and Pant et al. do not disclose or suggest this
feature, but alleged that Page discloses determining the popularity of a document. Final Office
Action, page 19. The Examiner alleged that determining a clickthrough rate is equivalent to
determining the popularity or how many hits the documents has had by other links linking to the
document and determining how important that document is. Final Office Action, page 19.
Appellants submit that this is an unreasonable allegation based solely on a flawed attempt to
reconstruct the claimed invention using impermissible hindsight for at least reasons similar to
reasons given with regard to claim 42.

For at least these reasons, it is respectfully submitted that claim 54 is patentable over
Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, under 35
U.S.C. § 103. Reversal of the rejection of claim 54 is respectfully requested.

     4.   Claim 55.

Dependent claim 55 recites that the links in the identified document point to a plurality of linked documents; and that determining the scores includes determining a measure of popularity associated with each of the linked documents, determining a score for each of the linked documents based on the determined measure of popularity, and associating the determined scores for the linked documents with the corresponding links in the identified document.

Claim 55 depends from claim 52. The disclosure of Page does not cure the deficiencies in the disclosures of Arthurs and Pant et al. identified above with regard to claim 52. Claim 55 is, therefore, patentable over Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 52.

For at least these reasons, it is respectfully submitted that claim 55 is patentable over Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 55 is respectfully requested.

     5.   Claim 62.

Dependent claim 62 recites that the links in the identified document point to a plurality of linked documents; and that the means for determining the scores includes means for determining a clickthrough rate for each of the linked documents, means for determining a score for each of the linked documents based on the determined clickthrough rates, and means for associating the determined scores for the linked documents with the corresponding links in the identified document.

Initially, claim 62 depends from claim 59. The disclosure of Page does not cure the deficiencies in the disclosures of Arthurs and Pant et al. identified above with regard to claim 59. Claim 62 is, therefore, patentable over Arthurs, Pant et al., and Page, whether taken alone or in

any reasonable combination, for at least the reasons given with regard to claim 59.

Additionally, Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 62. For example, Arthurs, Pant et al., and Page do not disclose or suggest means for determining a score for each of the linked documents based on a clickthrough rate for each of the linked documents.

The Examiner admitted that Arthurs and Pant et al. do not disclose or suggest this feature, but alleged that Page discloses determining the popularity of a document. Final Office Action, page 19. The Examiner alleged that determining a clickthrough rate is equivalent to determining the popularity or how many hits the documents has had by other links linking to the document and determining how important that document is. Final Office Action, page 19. Appellants submit that this is an unreasonable allegation based solely on a flawed attempt to reconstruct the claimed invention using impermissible hindsight for at least reasons similar to reasons given with regard to claim 42.

For at least these reasons, it is respectfully submitted that claim 62 is patentable over Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 62 is respectfully requested.

4.   Claim 63.

Dependent claim 63 recites that the links in the identified document point to a plurality of linked documents; and that the means for determining the scores includes means for determining a measure of popularity associated with each of the linked documents, means for determining a score for each of the linked documents based on the determined measure of popularity, and

means for associating the determined scores for the linked documents with the corresponding

links in the identified document.

Claim 63 depends from claim 59. The disclosure of Page does not cure the deficiencies

in the disclosures of Arthurs and Pant et al. identified above with regard to claim 59. Claim 63

is, therefore, patentable over Arthurs, Pant et al., and Page, whether taken alone or in any

reasonable combination, for at least the reasons given with regard to claim 59.

For at least these reasons, it is respectfully submitted that claim 63 is patentable over

Arthurs, Pant et al., and Page, whether taken alone or in any reasonable combination, under 35

U.S.C. § 103. Reversal of the rejection of claim 63 is respectfully requested.

VIII. CONCLUSION

In view of the foregoing arguments, Appellants respectfully solicit the Honorable Board

to reverse the Examiner's rejections of claims 39 and 41-66 under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is

hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess

fees to such deposit account.

Respectfully submitted,

HARRITY SNYDER, L.L.P.

/Paul A. Harrity, Reg. No. 39,574/
Paul A. Harrity
Reg. No. 39,574

Date: November 5, 2007
11350 Random Hills Road
Suite 600
Fairfax, Virginia 22030
(571) 432-0800

CLAIM APPENDIX

39.   A computer-implemented method, comprising:

identifying a document that is stored on a server in a network and that includes links to linked documents;

determining scores for a plurality of the links in the identified document;

modifying the identified document based on the determined scores, where the modifying includes:

> reordering at least two of the links based on the determined scores, or

> sorting at least two of the links based on the determined scores; and

providing the modified document to a user.

41.   The method of claim 39, wherein the links in the identified document point to a plurality of linked documents; and

wherein determining the scores includes:

for each of the linked documents, determining scores for one or more linking documents that contain links to the linked document,

determining a score for each of the linked documents based on the scores of the one or more linking documents, and

associating the determined scores for the linked documents with the corresponding links in the identified document.

42.   The method of claim 39, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

determining a clickthrough rate for each of the linked documents,

determining a score for each of the linked documents based on the determined

clickthrough rates, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

43.   The method of claim 39, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

determining a measure of popularity associated with each of the linked documents,

determining a score for each of the linked documents based on the determined measure of

popularity, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

44.   The method of claim 39, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

receiving input from the user,

determining a score for each of the linked documents based on the received input, and

associating the determined scores for the linked documents with the corresponding links in the identified document.

45.   The method of claim 44, wherein determining the score for each of the linked documents includes:

for each of the linked documents, comparing one or more words of the received input with a content of the linked document, and

determining a score for the linked document based on a degree of match between the one or more words and the content of the linked document.

46.   The method of claim 39, wherein modifying the identified document includes:

comparing the determined scores to a threshold, and

deleting one of the links from the identified document when the determined score for the one of the links falls below the threshold.

47.   A computer-implemented method, comprising:

receiving a search query;

providing a list of search results in response to the search query;

receiving selection of one of the search results in the list of search results;

identifying links in a document corresponding to the selected search result;

determining a score for one of the links based on a degree of match between the search query and a content of a linked document pointed to by the one of the links;

modifying the document based on the determined score for the one of the links; and

providing the modified document.

48.   The method of claim 47, wherein determining the score for the one of the links

includes determining scores for each of a plurality of the links in the document based on a degree

of match between the search query and a content of a linked document pointed to by the link;

and

wherein modifying the document includes:

reordering the links based on the determined scores.

49.   The method of claim 48, wherein reordering the links includes:

sorting the links based on the determined scores.

50.   The method of claim 47, wherein modifying the document includes:

changing at least one visual characteristic of the one of the links within the document

based on the determined score.

51.   The method of claim 47, further comprising:

comparing the determined score to a threshold; and

deleting the one of the links when the determined score for the one of the links falls

below a threshold.

52.   A computer-implemented method, comprising:

identifying a document that is stored on a server in a network and that includes links to

linked documents;

determining scores for a plurality of the links in the identified document;

comparing the determined scores to a threshold;

deleting one of the plurality of links from the identified document when the score for the

one of the links falls below the threshold; and

providing, to a user, the identified document without the deleted link.

53.   The method of claim 52, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

for each of the linked documents, determining scores for one or more linking documents

that contain links to the linked document,

determining a score for each of the linked documents based on the scores of the one or

more linking documents, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

54.   The method of claim 52, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

determining a clickthrough rate for each of the linked documents,

determining a score for each of the linked documents based on the determined

clickthrough rates, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

55.   The method of claim 52, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

determining a measure of popularity associated with each of the linked documents,

determining a score for each of the linked documents based on the determined measure of

popularity, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

56.   The method of claim 52, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

receiving input from the user,

determining a score for each of the linked documents based on the received input, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

57. The method of claim 56, wherein determining the score for each of the linked documents includes:

for each of the linked documents, comparing one or more words of the received input with a content of the linked document, and

determining a score for the linked document based on a degree of match between the one or more words and the content of the linked document.

58. The method of claim 52, further comprising:

determining additional information regarding a linked document pointed to by the one of the plurality of links when the score for the one of the links does not fall below the threshold; and

providing the identified document with the additional information to the user.

59. A system, comprising:

means for identifying a document based on an address associated with the document, the document including links that point to linked documents;

means for determining scores for a plurality of the links in the identified document;

means for comparing the determined scores to a threshold;

means for determining that a score for one of the plurality of links is greater than the threshold;

means for determining additional information regarding the linked document pointed to

by the one of the plurality of links; and

means for providing the identified document with the additional information to a user.

60.   The system of claim 59, further comprising:

means for determining that a score for another one of the plurality of links is not greater

than the threshold;

means for deleting the other one of the plurality of links from the identified document;

and

means for providing, to a user, the identified document without the deleted link.

61.   The system of claim 59, wherein the links in the identified document point to a

plurality of linked documents; and

wherein the means for determining the scores includes:

means for determining, for each of the linked documents, scores for one or more linking

documents that contain links to the linked document,

means for determining a score for each of the linked documents based on the scores of

the one or more linking documents, and

means for associating the determined scores for the linked documents with the

corresponding links in the identified document.

62.   The system of claim 59, wherein the links in the identified document point to a

plurality of linked documents; and

wherein the means for determining the scores includes:

means for determining a clickthrough rate for each of the linked documents,

means for determining a score for each of the linked documents based on the determined

clickthrough rates, and

means for associating the determined scores for the linked documents with the

corresponding links in the identified document.

63.   The system of claim 59, wherein the links in the identified document point to a

plurality of linked documents; and

wherein the means for determining the scores includes:

means for determining a measure of popularity associated with each of the linked

documents,

means for determining a score for each of the linked documents based on the determined

measure of popularity, and

means for associating the determined scores for the linked documents with the

corresponding links in the identified document.

64.   The system of claim 59, wherein the links in the identified document point to a

plurality of linked documents; and

wherein the means for determining the scores includes:

means for receiving input from the user,

means for determining a score for each of the linked documents based on the received

input, and

    means for associating the determined scores for the linked documents with the corresponding links in the identified document.

    65.   The system of claim 64, wherein the means for determining the score for each of the linked documents includes:

    means for comparing, for each of the linked documents, one or more words of the received input with a content of the linked document, and

    means for determining a score for the linked document based on a degree of match between the one or more words and the content of the linked document.

    66.   The system of claim 59, wherein the additional information includes an excerpt from the linked document, a size of the linked document, or a date of last modification of the linked document.

IX.   EVIDENCE APPENDIX

None

X.   RELATED PROCEEDINGS APPENDIX

None